Update Number 1

HERCULANEUM LEAD SMELTER SITE
Lead Removal

Herculaneum, Missouri March 2002

This is the first of several updates that will provide general site information to keep you abreast of site activities, cleanup progress and address your concerns. For the past several months, we have been providing much of this information in regularly scheduled Herculaneum Lead Smelter Site Community Advisory Group meetings and at public meetings. However, we know that many Herculaneum residents do not attend these meetings, but are still very interested in EPA's activities in the community. We hope that regular updates such as this one will be useful to all residents, including those with whom we do not regularly get a chance to meet. Our goal is to provide an overview of the site, the problems found, the actions we have taken to address your concerns, as well as future plans.

Over the last several months, we have heard many issues and concerns expressed by you and your neighbors. In the future, we intend to provide several more updates, similar to this one. In each update, we will address one or more of these important issues and concerns. If you find that an issue of importance is not being addressed, please let us know.

Yard and Home Cleanups

The yard soil replacement effort continues throughout the winter months. As of March 12, 2002, yard soils have been replaced at a total of 66 residences. Home interior cleanups have been underway since early January 2002. Twenty seven (27) homes have been confirmed clean. Six church properties have had their interiors cleaned. Soil is being replaced along the contaminated haul roads. Weather permitting, EPA anticipates that all residential properties with soil concentrates greater than 400 parts per million east of Highway 61/67 in Herculaneum, where children 6 years old and younger live, will have their soils replaced within the next month.

Most Herculaneum residents that live east of Highway 61/67 have received yard soil sample results. For a few residences, we are awaiting laboratory results and will forward those when received. The highest soil lead concentration found in any area of the yard will be the value used to prioritize the residence for yard soil replacement. The following schedule provides a general timetable for yard soil replacements:

Category	Time frame for yard soil replacement
Homes with children 6 years old or younger with blood lead levels in excess of 10 ug/dl and soil lead levels over 400 parts per million lead	Within 30 days of Doe Run being notified by EPA of residence location
Child care providers with soil lead levels over 400 parts per million lead	Within 30 days of being notified by EPA of residence location
Homes with resident children at or under 6 years old and soil lead level over 400 parts per million lead	Within 4 months of January 1, 2002
Homes, parks, playgrounds, and elementary schools with soil lead level over 10,000 parts per million lead	Within 6 months of January 1, 2002
Homes, parks, playgrounds, and schools with soil lead levels between 2,500 parts per million lead and 10,000 parts per million lead	Within 12 months of January 1, 2002
Homes, parks, playgrounds, and schools with soil lead levels between 400 and 2,500 parts per million lead	At a rate of 60 yards per year

Interiors of homes are being cleaned within 30 days of the completion of yard soil replacements.

Additional sampling to characterize surface soil lead contamination further out from the smelter facility will start later this year. Residential property owners will be contacted for permission to conduct this sampling and potential soil replacement prior to starting this work. The work will be performed at no cost to the homeowner and EPA representatives will be present to oversee the work.

Temporary Relocation

A total of 27 families have taken advantage of the temporary relocations. Most of these families have already returned to their completed homes. The U.S. Army Corps of Engineers is coordinating the temporary relocation effort for EPA.

EPA's temporary relocation offer is still available. The temporary relocation is for:

- Households with children 6 years old and younger with soil lead levels above 400 parts per million.
- Households with a pregnant woman.
- Households with residents who are potentially sensitive to lead exposure will be considered for temporary relocation on a case by case basis.

The relocation is being offered on a voluntary basis. It is anticipated that the relocation will range from 3 to 10 weeks, and will depend on what order residential properties are being addressed.

Health Information

The Agency for Toxic Substances and Disease Registry and the Missouri Department of Health and Senior Services continue to work very closely with EPA and the Missouri Department of Natural Resources.

At the request of the Herculaneum Lead Smelter Community Advisory Group, the Missouri Department of Health and Human Services completed a Health Consultation that evaluated all known blood lead data collected from Herculaneum residents during the 2001 calender year.

The Health Consultation concluded that 28 percent of children up to 6 years of age have blood lead levels known to cause adverse health effects, and that 45 percent of the children up to 6 years of age residing east of Highway 61/Commercial Boulevard have blood lead levels known to cause adverse health effects. The Health Consultation is available for review on the Web at: http://www.dhss.state.mo.us/PreventionAndWellness/EnvironHealth.html

We encourage you to have your child tested for lead exposure. Please contact your private physician or the Jefferson County Health Department at 636-789-3372 to have your child tested.

We advise you to continue to take the following actions to reduce your and your children's exposure to lead. It is advisable to take the following actions:

- Have children play on solid grass cover in yards or parks.
- Remove shoes before entering your home.
- Do not allow children to play in the street or on the curbs.
- Encourage children not to put their hands in their mouths.
- Encourage frequent hand and face washing before eating, drinking and sleeping.
- Wash outside toys before bringing them into the house.

In your home, dust or dirt containing lead can be removed by wet cleaning floors, windowsills, cabinets, toys, and other places children may play. Wet-clean by using warm water and a general all-purpose cleaner or a cleaner made specifically for lead. To remove lead from carpets, wet shampoo often. HEPA vacuums are also effective at removing lead dust particles found in the carpet.

Most often children are poisoned by swallowing dust, dirt, or paint containing lead. To reduce lead intake, eat small, frequent meals that are high in iron and calcium and low in fat. Foods such as milk, cheese, ice cream, eggs, chicken, liver, chili, spinach, greens, beans, and whole grain breads will help to prevent lead poisoning and lower lead levels. Foods rich in vitamin C will enhance the absorption of iron from plant foods. Add a food or drink with vitamin C to each meal. Do not serve hot or iced tea. Tea keeps the body from taking in iron.

Frequently Asked Questions

What is EPA's approach to the cleanup of Herculaneum?

EPA's focus is protection of the health of young children who are exposed to lead in Herculaneum. EPA's approach to the site has two goals. One goal is to quickly remove historic lead contamination from yards, homes, and other areas where young children can come in contact with lead. At the same time, the second goal is to quickly reduce the lead emissions from the

smelter operations to prevent recontamination. EPA has begun extensive monitoring for recontamination If that monitoring shows that recontamination is occurring, EPA will take actions to prevent it from continuing. EPA is not going to allow the Doe Run operation to recontaminate the residential yards in Herculaneum and begin a cycle of continuous residential cleanup actions.

Why are you cleaning up soils and homes before all the lead sources have been addressed?

Although work to cut the smelter's lead emissions is continuing, we believe that it is important to take immediate actions to reduce young children's exposure to lead. There is potential for adverse health effects to occur in young children from short time- duration exposures to lead, and so EPA believes that the immediate cleaning of homes and yards where young children reside is important. Studies have shown that reducing lead contamination of residential yard soils and interior dust can significantly reduce the exposure to lead for young children. For similar reasons, EPA has also taken steps to accelerate the replacement of surface soils at parks, playgrounds, and schools; provide HEPA vacuum cleaners to residences; encourage community outreach and education; and offer voluntary temporary relocation for populations most at risk of incurring potential adverse health effects from exposure to lead.

Why aren't home interiors sampled prior to cleaning them?

EPA typically only samples home interiors prior to cleanup to determine if interior cleaning of a particular home is necessary. However, in Herculaneum, Doe Run has agreed to clean every home interior where they are replacing yard soil. Since Doe Run is cleaning every home which requires soil replacement, sampling interiors prior to cleanup is not necessary. Home interiors are sampled following cleaning, to confirm that the cleaning is successful.

Why aren't attics, basements, and spaces between interior and exterior walls included in the cleanup?

The interior dust cleanup focus on cleaning the most frequently used areas in the home where exposure to lead dust is most likely. Unfinished attics that are sealed off from the home's living area do not pose a significant exposure threat. Unfinished basements that are not used as a living space also do not pose a significant threat. Lead contamination within the walls of homes near the smelter does not pose a significant exposure threat unless there are breaches in the walls that are not repaired.

EPA encourages Herculaneum residents to routinely clean the living areas in their homes using a HEPA vacuum and phosphate detergent as a practical measure to reduce the risk of exposure to lead dust.

What is being done at schools and churches?

Doe Run is replacing contaminated surface soils at schools, parks, and playgrounds in Herculaneum. Doe Run has also completed the cleaning of six church building interiors located in Herculaneum. With respect to interiors of the public schools in Herculaneum, we have not made interior cleaning of the schools a top priority because our understanding is that children younger than 6 years old do not attend those schools.

Why aren't yards being cleaned block by block instead of residences with children, then highest soils?

Since our top priority is to protect the children in Herculaneum, we are focusing the initial cleanup effort and resources at homes where young children live. By addressing those yards first, the children's exposure to the lead is greatly reduced. Based on our experience at other sites, we do not expect to see recontamination of clean yards from adjacent yards that have not yet been cleaned.

Will EPA monitor for recontamination of homes and yards that have been cleaned?

EPA has reviewed historic recontamination rates on previously cleaned yards and believe that recontamination have been have too high. Doe Run has implemented and is continuing to implement emission controls on many of its processes and materials handling practices at the smelter. Preliminary air monitoring data indicates that emissions have been reduced and thus the rate of recontamination has also been lowered. EPA will continue to press Doe Run to expedite the remaining controls and implement materials handling practices to further reduce emissions. EPA is in the early stages of implementing a recontamination monitoring plan that will measure the rates of recontamination. EPA will not allow Doe Run to recontaminate the residential yards in Herculaneum and begin a cycle of continuous residential cleanups.

Why is only the top foot of soil from my yard being replaced?

The highest risk posed by soil contamination is exposure of small children to the surface soil. Removing soil to a one foot depth significantly reduces that risk. Small children are infrequently exposed to soils more than one foot in depth. Also, most soil contamination is located in the upper foot of soil. Thus, removal of soil deeper than one foot does very little to reduce further risks. In the event that lead contamination exists deeper than one foot, a barrier is placed prior to backfilling with clean soil to alert persons that contamination exists below that depth.

Why is soil from only certain areas of my yard being replaced?

The soil replacement is performed based upon the lead level found in each "quadrant" of the property. Properties were sampled by dividing each into four quadrants. On some properties, gravel drives, play areas and areas adjacent to haul routes were also sampled. When a soil removal is conducted, each area sampled which exceeds the cleanup level of 400 parts per million is replaced. Thus, if only one or two quadrants exceed the cleanup level, those will be the only areas replaced. The other areas will remain.

Clip and Save ✂✂✂✂✂

HERCULANEUM LEAD SMELTER SITE CONTACT LIST

If you have questions, please contact:

Health Information
Agency for Toxic Substances
and Disease Registry
Denise Jordan-Izaguirre
1-913-551-1310

Missouri Department of Health
and Senior Services
Gale Carlson
1-800-392-7245
1-800-392-0272
email: carlsg@dhss.state.mo.us

Jefferson County Health Department
636-789-3372

Herculaneum Lead Smelter Site Community Advisory Group
Angela Searingen, Chairperson
636-475-3319

Site Information/Temporary Relocation
EPA Region 7
Tony Petruska
Bruce Morrison
1-800-223-0425

Site Information
Missouri Department of
Natural Resources
Karen Cass
Dave Mosby
1-573-751-8629

Primary Focus Group Contact
Hattie Thomas
EPA Region 7
901 N. 5th Street
Kansas City, Kansas 66101
1-913-551-7003
1-800-223-0425
email: thomas.hattie@epa.gov